

TNF-gamma

1 CCCAATCAAGAGAAATTCCATACTATCACCAGTTGCCCGACTTTCCAAGTCTAGTGCAGA 60
 61 AATCCAAGGCACCTCACACCTAGAGTTCCTATACCTCTGAGACTCCAGAGGAAAGAACAA 120
 121 GACAGTGCAGAAGGATATGTTAGAACCCACTGAAAACCTAGAAGGTTGAAAAGGAAGCAT 180
 181 ACCCTCCTGACCTATAAGAAAATTTTCAGTCTGCAGGGGATATCCTTGTGGCCCAAGAC 240
 241 ATTGGTGTATCATTTGACTAAGAGGAAATTATTTGTGGTGAGCTCTGAGTGAGGATTAG 300
 301 GACCAGGGAGATGCCAAGTTTCTATCACTTACCTCATGCCTGTAAGACAAGTGTTTTGT 360
 361 CCAATTGATGAATGGGAGAAAACAGTTCAGCCAATCACTTATGGGCACAGAATGGAATT 420
 421 TGAAGGGTCTGGTGCCTGCCCTTGTACATACGTAAACAAGAGAGGCATCGATGAGTTTTAT 480
 481 CTGAGTCATTTGGGAAAGGATAATTCTTGACCAAGCCAATTTTCCTAAACACAGAAGAAT 540
 541 AGGGGGATTCTTAACCTTCATTGTTCTCCAGGATCATAGGTCTCAGGATAAATTAAAAA 600
 601 TTTTCAGGTCAGACCACTCAGTCTCAGAAAGGCAAAGTAATTTGCCCCAGGTCAGTAGTC 660
 661 CAAGATGTTATTCTCTTTGAACAAATGTGTATGTCCAGTCACATATTCTTCATTATTCC 720
 721 TCCCCAAAGCAGTTTTTAGCTGTTAGGTATATTGATCACITTAGTCTATTTTGAAAATG 780
 781 ATATGAGACGCTTTTTAAGCAAAGTCTACAGTTTCCAATGAGAAAATTAATCCTCTTTC 840
 1 M R R F L S K V Y S F P M R K L I L F L 20
 841 TTGTCTTTCCAGTTGTGAGACAAACTCCACACAGCACTTTAAAAATCAGTTCCAGCTC 900
 21 V F P V V R Q T P T Q H F K N Q F P A L 40
 901 TGCACTGGGAACATGAAGTGGCCTTCCCAAGAACCGAATGAAGTATACCAACA 960
 41 H W E H E L G L A F T K N R M N Y T N K 60
 961 AATTCCTGCTGATCCCAGAGTCGGGAGACTACTTCATTTACTCCCAGGTCACATCCGTG 1020
 61 F L L I P E S G D Y F I Y S Q V T F R G 80

FIG. 1A

TNF-gamma

| | | |
|------|---|------|
| 1021 | GGATGACCTCTGAGTGCAGTGAATCAGACAAGCAGGCCGACCAAACAAGCCAGACTCCA | 1080 |
| 81 | M T S E C S E I R Q A G R P N K P D S I | 100 |
| 1081 | TCACTGTGGTCATCACCAAGGTAACAGACAGCTACCCTGAGCCAACCCAGCTCCTCATGG | 1140 |
| 101 | T V V I T K V T D S Y P E P T Q L L M G | 120 |
| 1141 | GGACCAAGTCTGTATGCCAAGTAGGTAGCAACTGGTTCAGCCCATCTACCTCGGAGCCA | 1200 |
| 121 | T K S V C E V G S N W F Q P I Y L G A M | 140 |
| 1201 | TGTTCTCCTTGCAAGAAGGGGACAAGCTAATGGTGAACGTCAGTGACATCTCTTTGGTGG | 1260 |
| 141 | F S L Q E G D K L M V N V S D I S L V D | 160 |
| 1261 | ATTACACAAAAGAAGATAAAACCTTCTTTGGAGCCTTCTTACTATAGGAGGAGAGCAAAT | 1320 |
| 161 | Y T K E D K T F F G A F L L * | 175 |
| 1321 | ATCATTATATGAAAGTCCTCTGCCACCGAGTTCCTAATTTTCTTTGTTCAAATGTAATTA | 1380 |
| 1381 | TAACCAGGGGTTTTCTTGGGGCCGGGAGTAGGGGGCATTCCACAGGGACAACGGTTTAGC | 1440 |
| 1441 | TATGAAATTTGGGGCCAAAATTCACACTTCATGTGCCTTACTGATGAGAGTACTAACTG | 1500 |
| 1501 | GAAAAAGGCTGAAGAGAGCAAATATATTATTAAGATGGGTGGAGGATTGGCGAGTTTCT | 1560 |
| 1561 | AAATATTAAGACACTGATCACTAAATGAATGGATGATCTACTCGGGTCAGGATTGAAAGA | 1620 |
| 1621 | GAAATATTTCAACACCTCCCTGCTATACAATGGTCACCAGTGGTCCAGTTATTGTTCAAT | 1680 |
| 1681 | TTGATCATAAATTTGCTTCAATTCAGGAGCTTTGAAGGAAGTCCAAGGAAAGCTCTAGAA | 1740 |
| 1741 | AACAGTATAAACTTTTACAGGGCAAAATCCTTCACCAATTTTCCACATACTTTTCATGCCT | 1800 |
| 1801 | TGCCTAAAAAAAATGAAAAGAGAGTTGGTATGTCTCATGAATGTTACACAGAAGGAGTT | 1860 |
| 1861 | GGTTTTTCATGTCATCTACAGCATATGAGAAAAGCTACCTTTCTTTTGATTATGTACACAG | 1920 |
| 1921 | ATATCTAAATAAGGAAGTTTGAGTTTCACATGTATATCCCAAATACAACAGTTGCTTGTA | 1980 |
| 1981 | TTCAGTAGAGTTTTCTTGCCACCTATTTTGTGCTGGGTCTACCTTAACCCAGAAGACA | 2040 |

FIG. 1B

TNF-gamma

2041 CTATGAAAAACAAGACAGACTCCACTCAAATTTATATGAACACCACTAGATACTTCCTG 2100
2101 ATCAAACATCAGTCAACATACTCTAAAGAATAACTCCAAGTCTTGGCCAGGCCGAGTGGC 2160
2161 TCACACCTGTAATCCCAACACTTTGGGAGGCCAAGGTGGGTGGATCATCTAAGGCCGGGA 2220
2221 GTTCAAGACCAGCCTGACCAACGTGGAGAAACCCCATCTCTACTNAAAATACNAAATTAG 2280
2281 CCGGGCGTGGTAGCGCATGGCTGTAANCCTGGCTACTCAGGAGGCCGAGGCAGAANAATT 2340
2341 NCTTGAAGTGGGAGGCAGAGGTTGCGGTGAGCCCAGANCGGCCATTGCACTCCAGCCT 2400
2401 GGGTAACAAGAGCAAAACTCTGTCCAAAAAAAAAAAAAAAAAAAA 2442

FIG. 1C

MATCH WITH FIG. 2A

MATCH WITH FIG. 2A

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------|---|----------|----------|----------|
| 40 | T | P | S | A | A | Q | T | A | R | Q | H | P | K | M | H | L | A | H | S | T | L | K | P | A | A | H | L | L | G | TNfbeta | | | | |
| 71 | F | - | - | - | - | Q | K | L | P | E | E | P | P | E | T | D | L | S | P | G | L | - | - | R | S | V | A | H | L | L | G | LTbeta | | |
| 121 | V | S | S | F | E | K | Q | I | A | N | P | S | T | P | S | E | T | K | K | P | - | - | - | - | - | - | - | - | - | - | - | FASL | | |
| 38 | - | - | - | - | - | P | - | A | L | H | W | E | H | N | N | A | T | T | L | N | A | F | L | L | L | L | L | L | L | L | L | TNfgamma | | |
| 95 | N | P | Q | S | A | E | Q | N | G | - | Q | S | G | L | E | L | R | A | D | E | Q | T | L | N | E | S | L | S | L | S | L | TNfalpha | | |
| 70 | D | A | P | P | L | R | S | S | I | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | TNfbeta | | |
| 95 | A | P | P | L | R | S | S | I | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | LTbeta | | |
| 149 | N | P | Q | S | A | E | Q | N | G | - | Q | S | G | L | E | L | R | A | D | E | Q | T | L | N | E | S | L | S | L | S | L | FASL | | |
| 61 | F | L | L | I | P | E | S | G | D | V | F | I | Y | S | Q | V | T | L | V | G | Y | F | R | G | M | T | S | E | C | - | - | - | TNfgamma | |
| 123 | Q | L | V | V | P | S | E | G | L | V | F | L | I | Y | S | Q | V | T | L | V | G | Y | F | R | G | M | T | S | E | C | - | - | - | TNfalpha |
| 98 | S | L | L | V | P | T | S | G | I | V | F | L | I | Y | S | Q | V | T | L | V | G | Y | F | R | G | M | T | S | E | C | - | - | - | TNfbeta |
| 124 | G | L | A | L | P | Q | D | G | L | V | Y | L | V | Y | S | C | L | K | Y | R | G | Q | S | C | - | - | - | - | - | - | - | - | LTbeta | |
| 177 | G | L | V | I | N | E | A | G | L | V | Y | L | V | Y | S | C | L | K | Y | R | G | Q | S | C | - | - | - | - | - | - | - | - | FASL | |
| 91 | A | G | R | P | N | K | T | H | S | I | T | V | V | I | S | Q | V | T | D | V | S | Y | P | E | P | T | Q | - | - | - | - | - | TNfgamma | |
| 146 | - | - | - | - | - | P | S | S | R | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | TNfalpha | | |
| 125 | - | - | - | - | - | P | S | S | R | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | TNfbeta | | |
| 154 | G | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | LTbeta | | |
| 204 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | FASL | | |

MATCH WITH FIG. 2C

FIG.2B

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FIG. 3A

Tissue distribution of TNFgamma mRNA

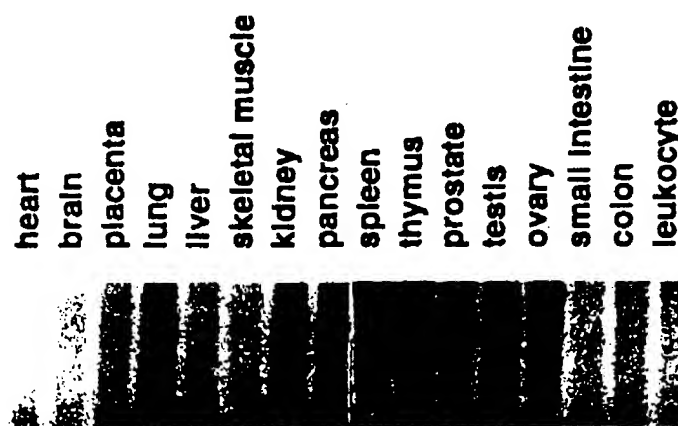
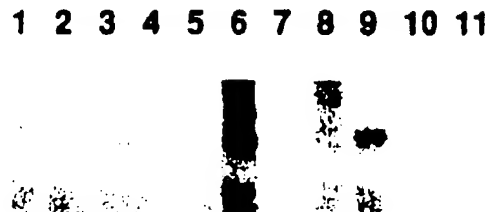
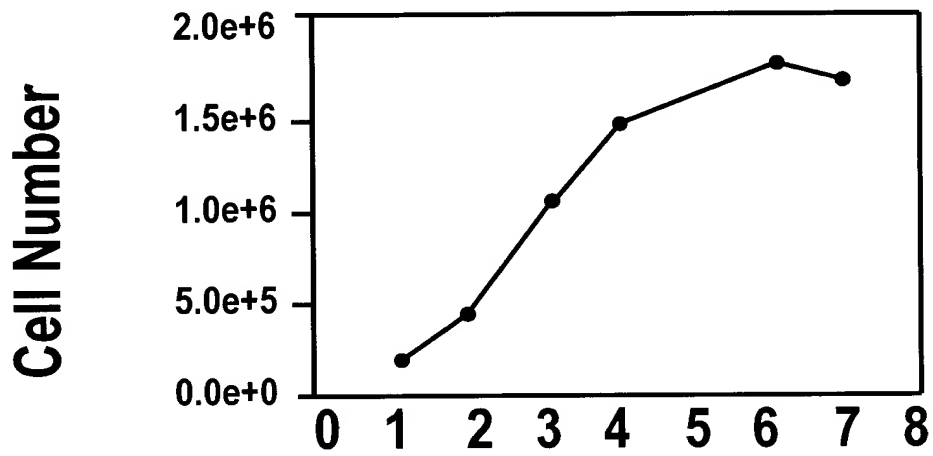


FIG. 3B

Expression of TNFgamma in HUVEC



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TNF-gamma

Beta-actin

Days

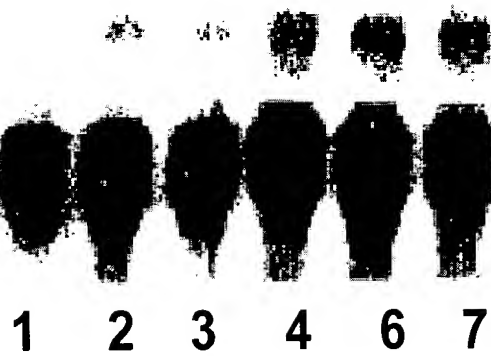


FIG. 4

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Expression of TNF γ in *E. coli*

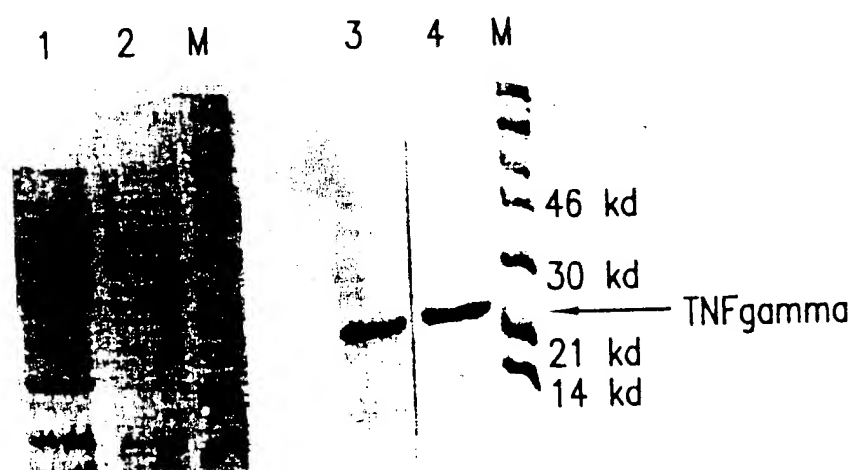


FIG.5

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Expression of TNF_γ in baculovirus system

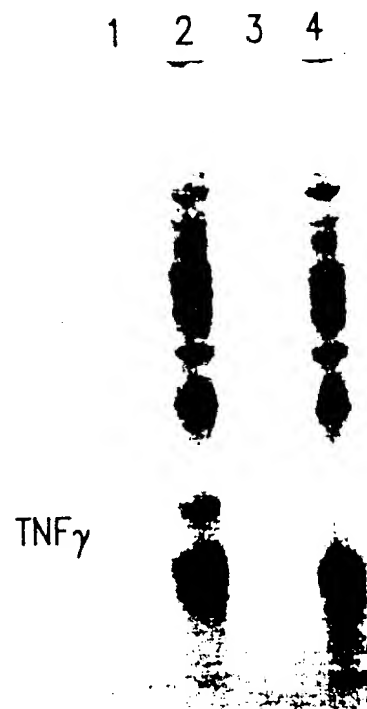


FIG.6

WEHI164
TNF α



FIG. 7Ab

WEHI164
Control



FIG. 7Aa

WEHI164
TNF β



FIG. 7Ad

WEHI164
TNF γ

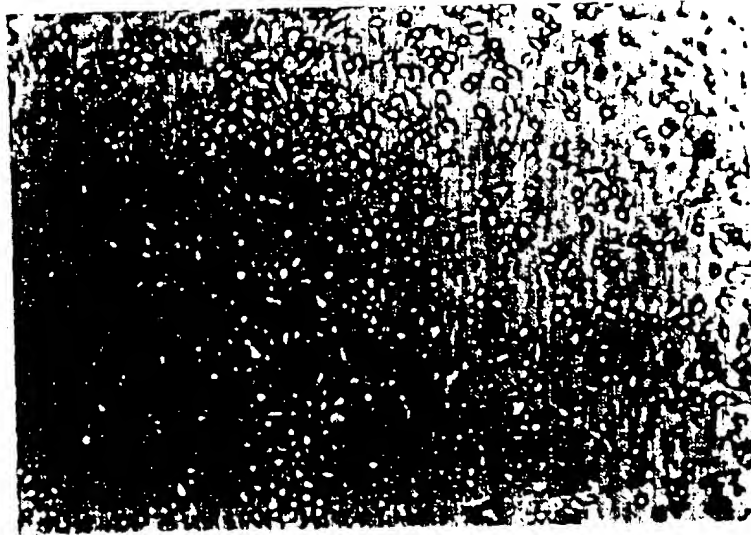


FIG. 7Ac

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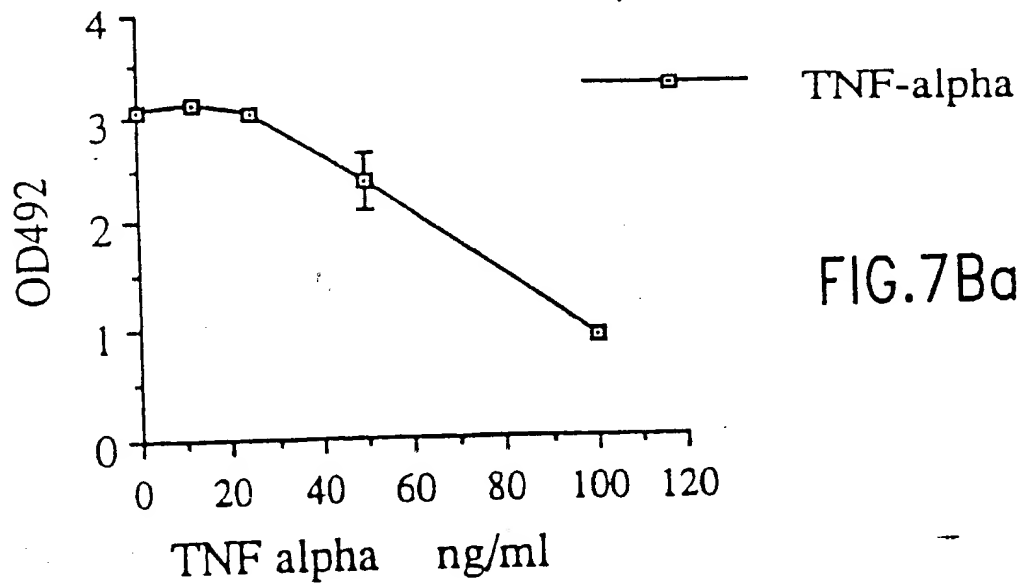


FIG.7Ba

FIG.7Bb

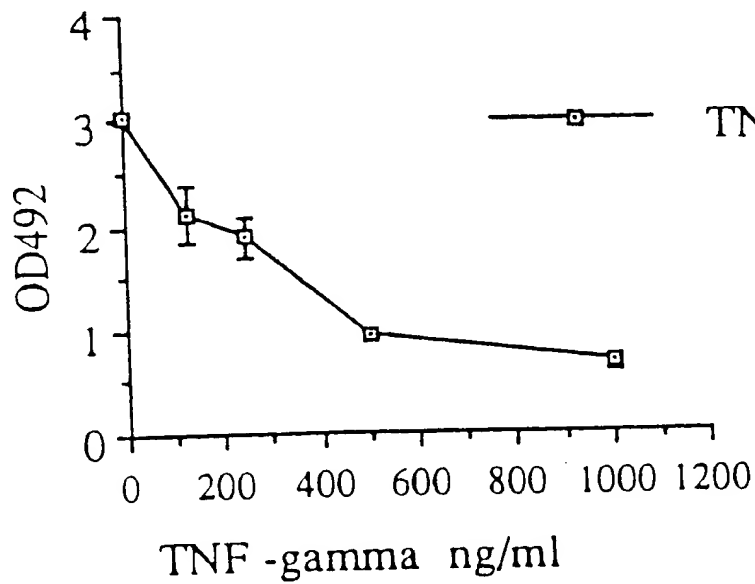
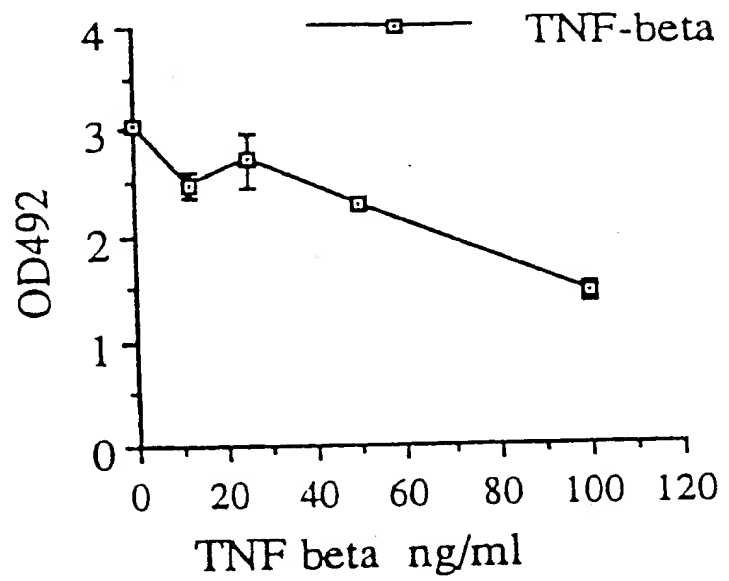


FIG.7Bc

L929
TNF α

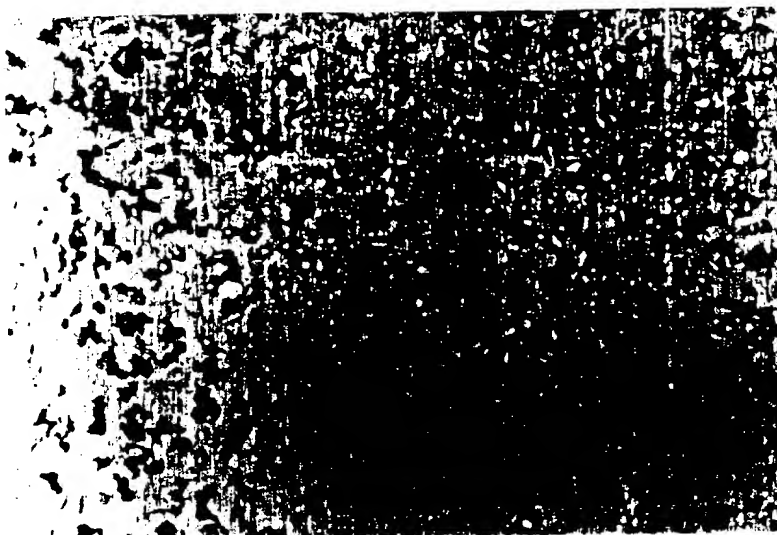


FIG.8B

L929
Control

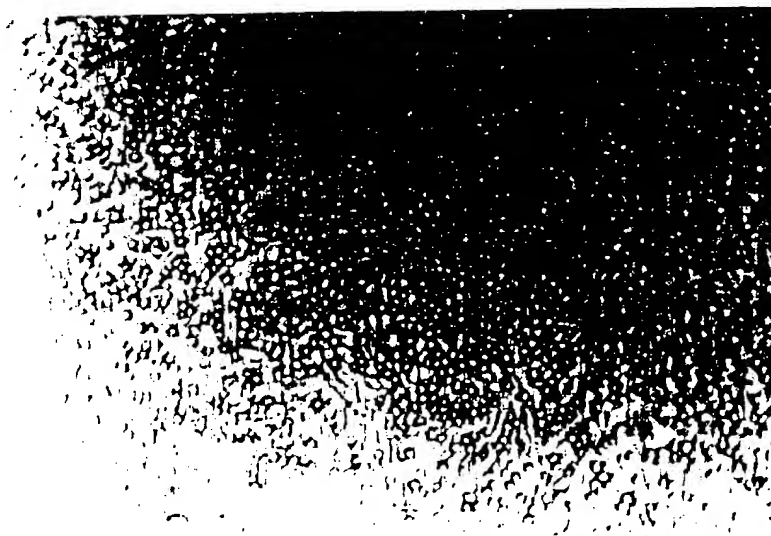


FIG.8A

L929
TNF β

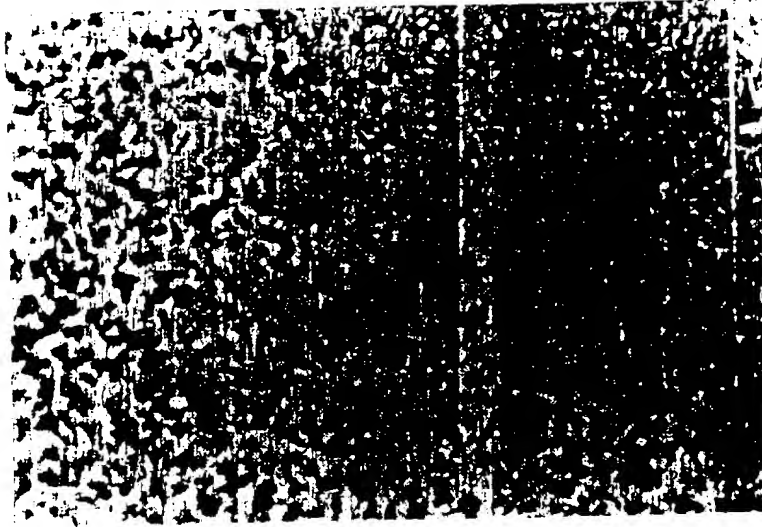


FIG. 8D

L929
TNF γ

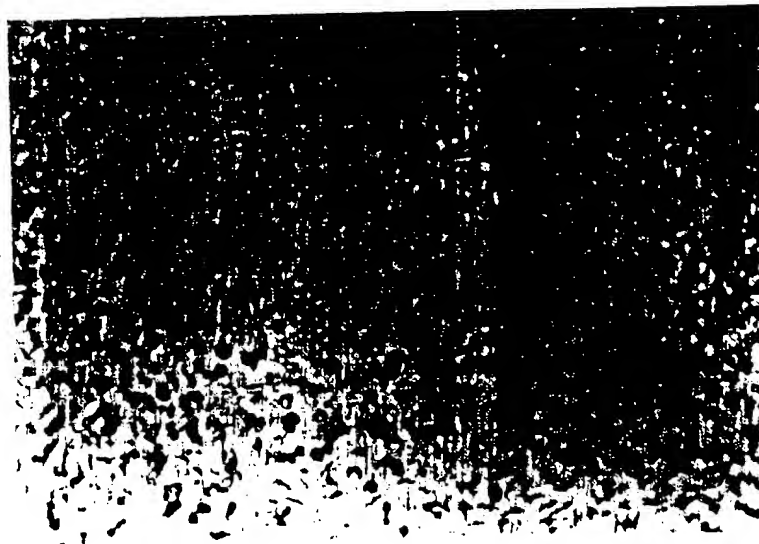


FIG. 8C

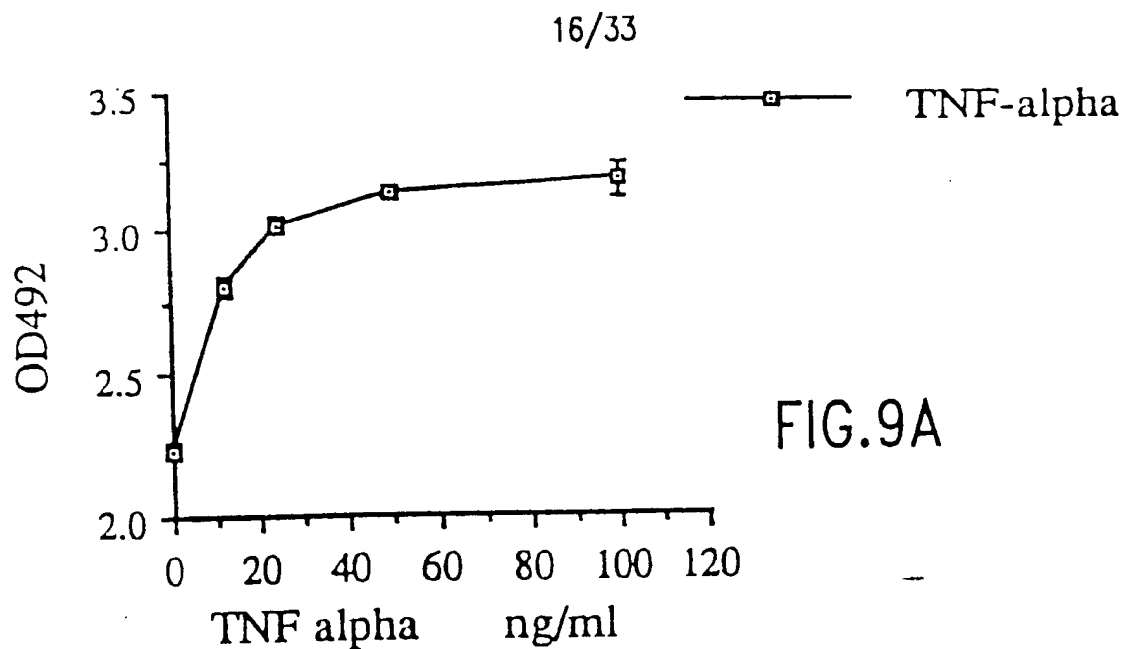


FIG.9A

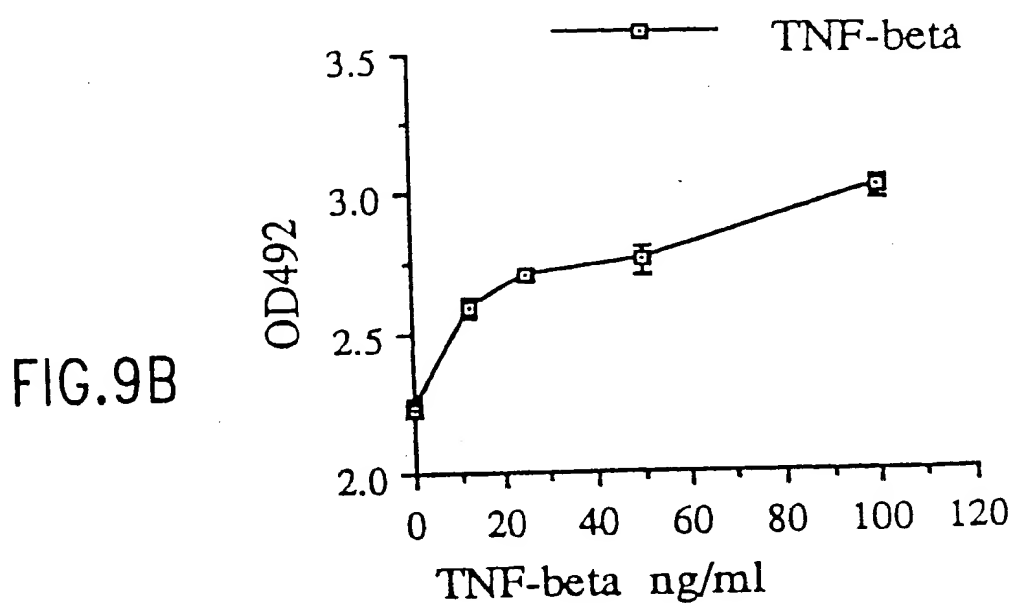


FIG.9B

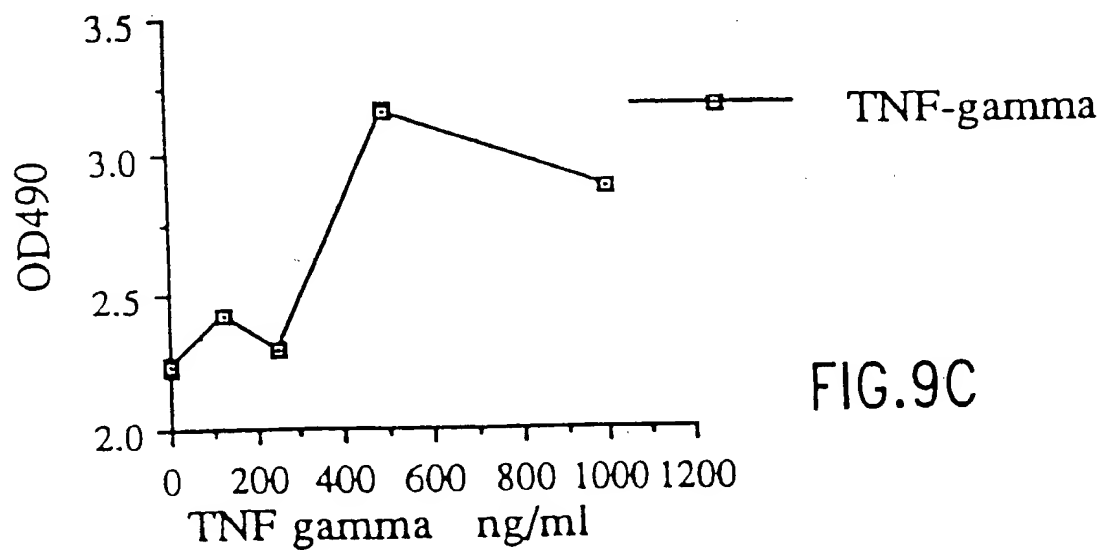


FIG.9C

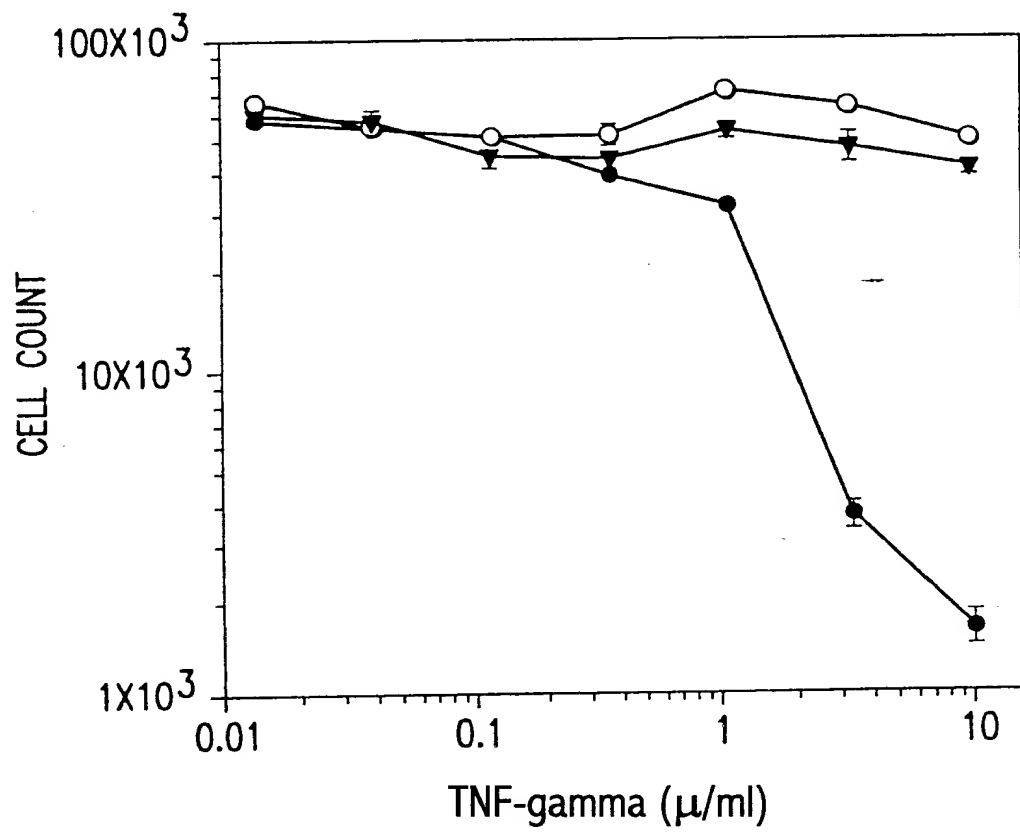


FIG.10

HL60
TNF α

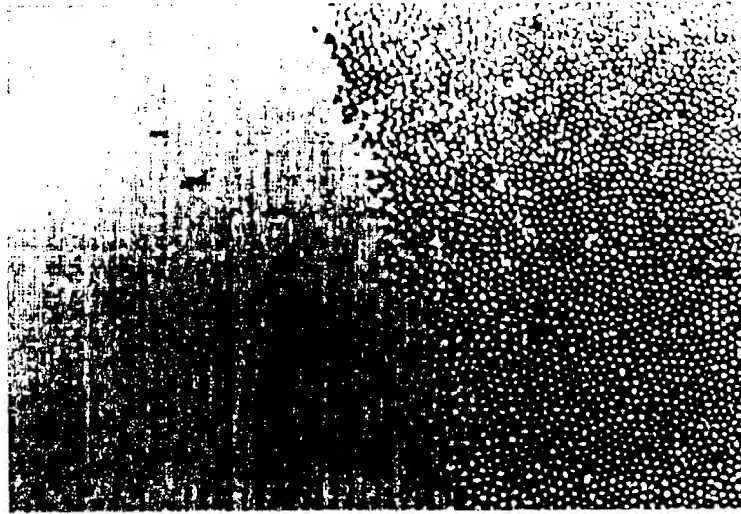


FIG.11B

HL60
Control

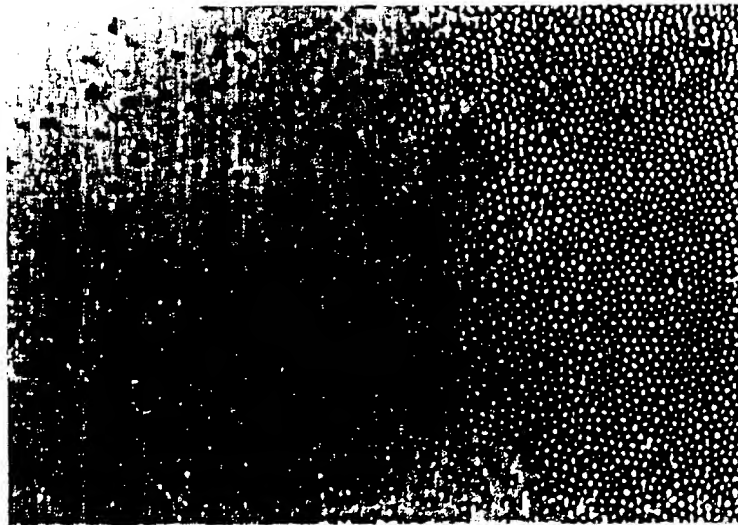


FIG.11A

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HL60
TNF γ

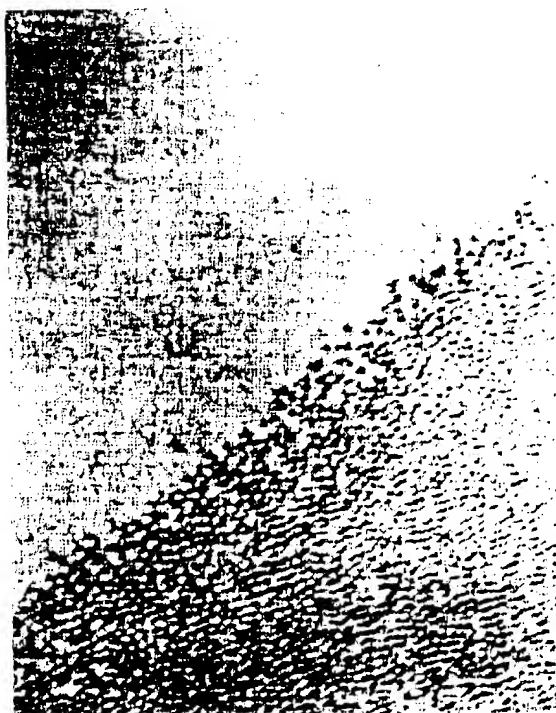


FIG.11C

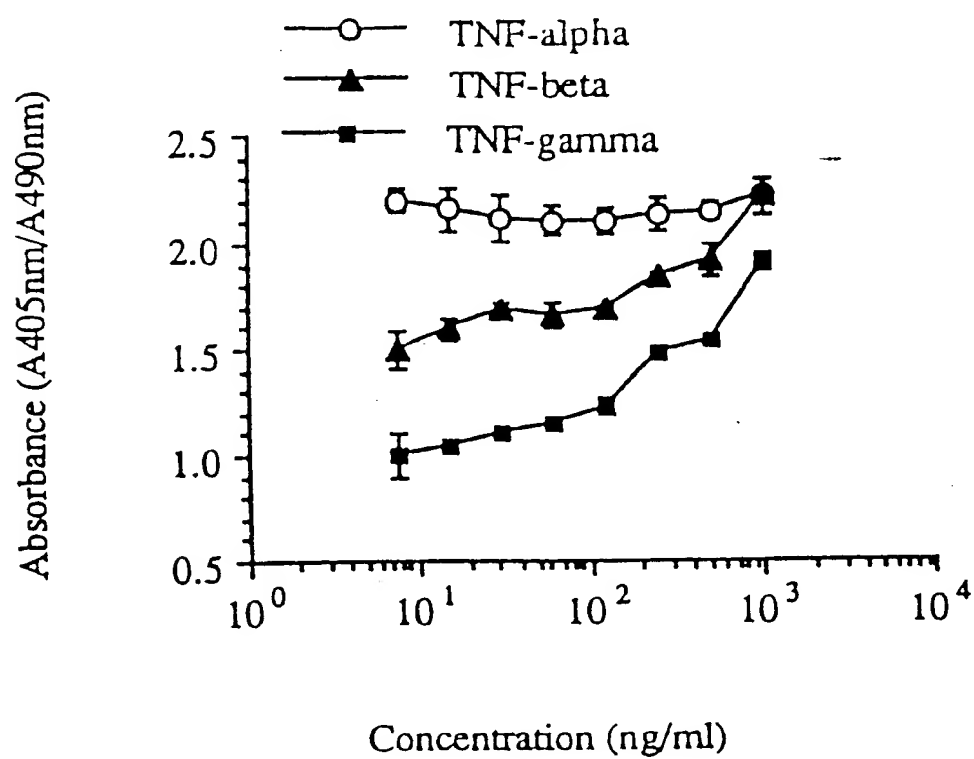


FIG.12

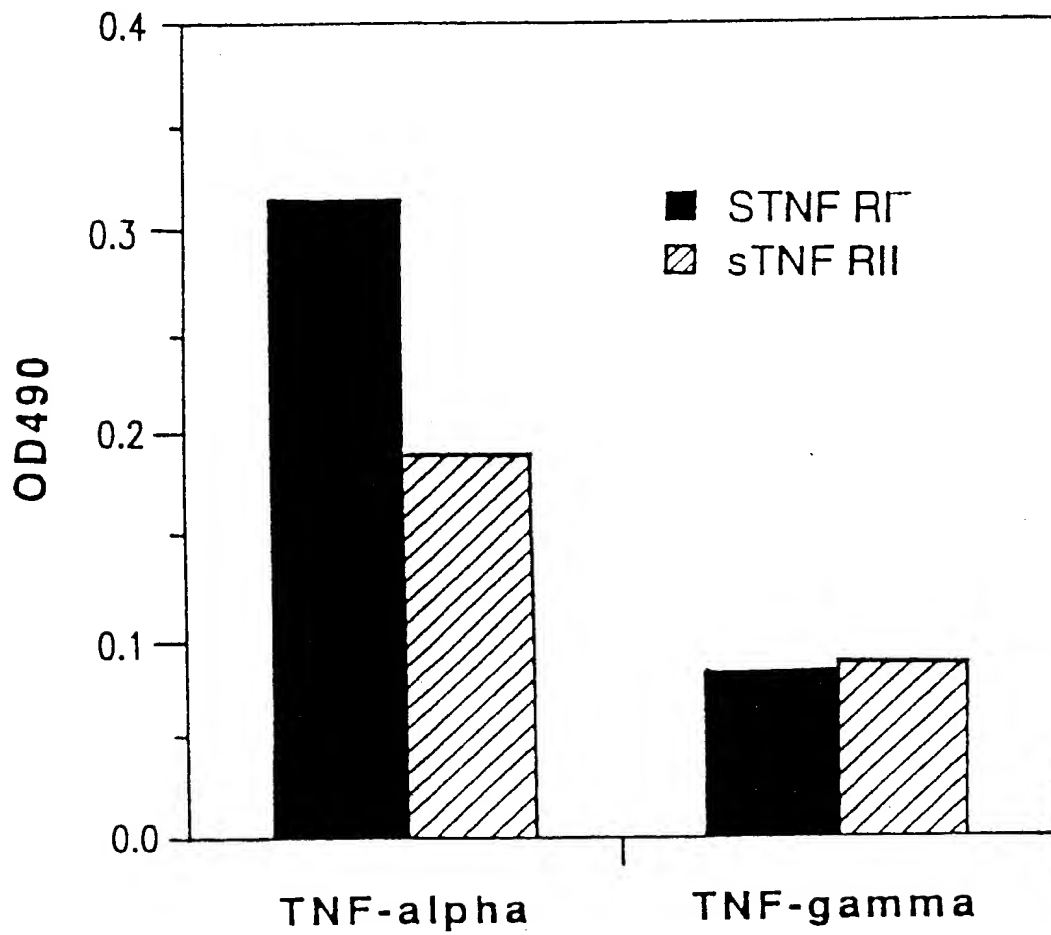


FIG.13

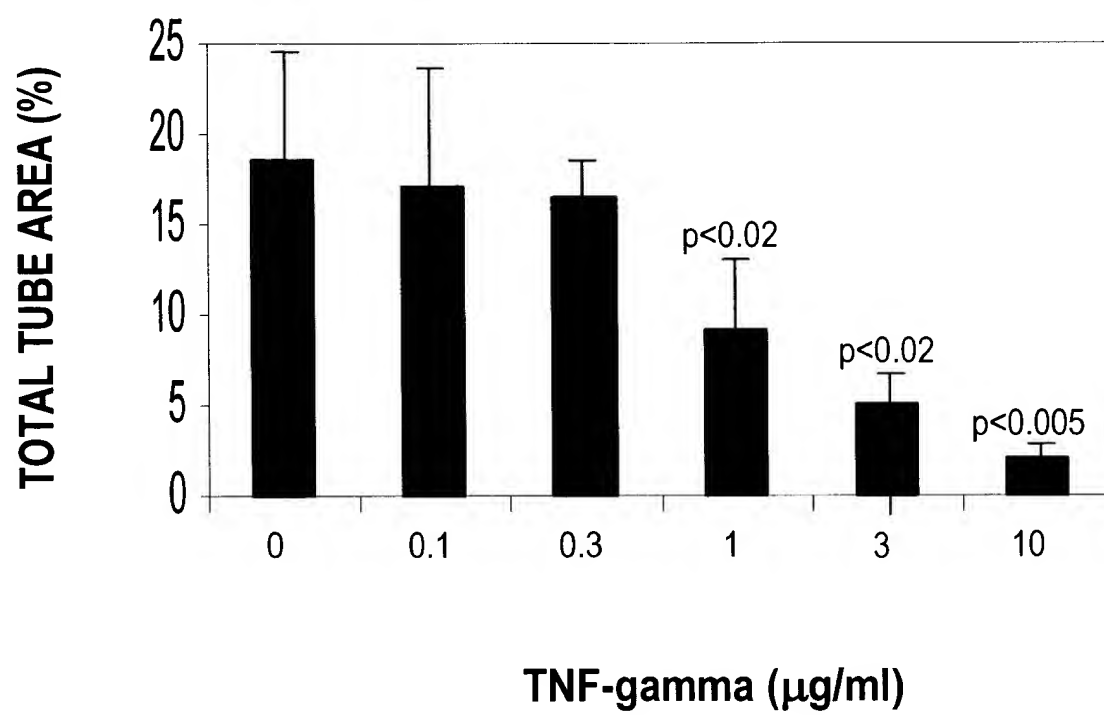


FIG. 14

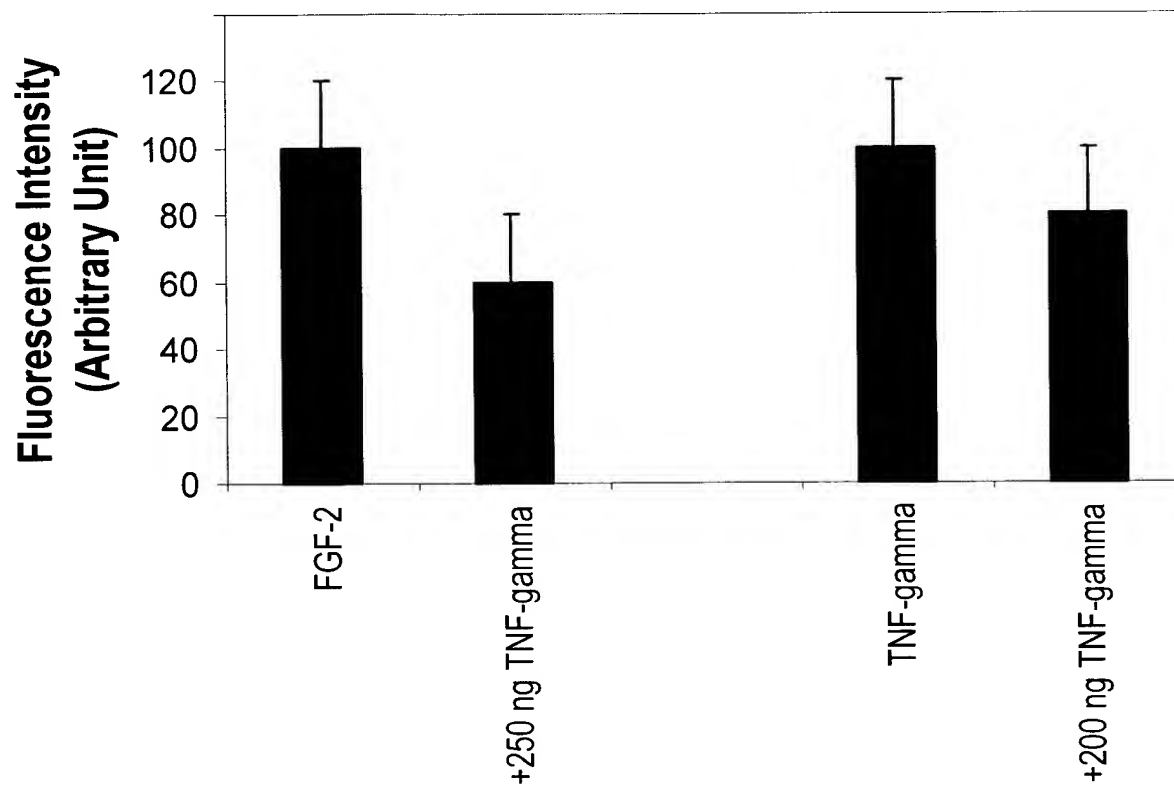


FIG. 15

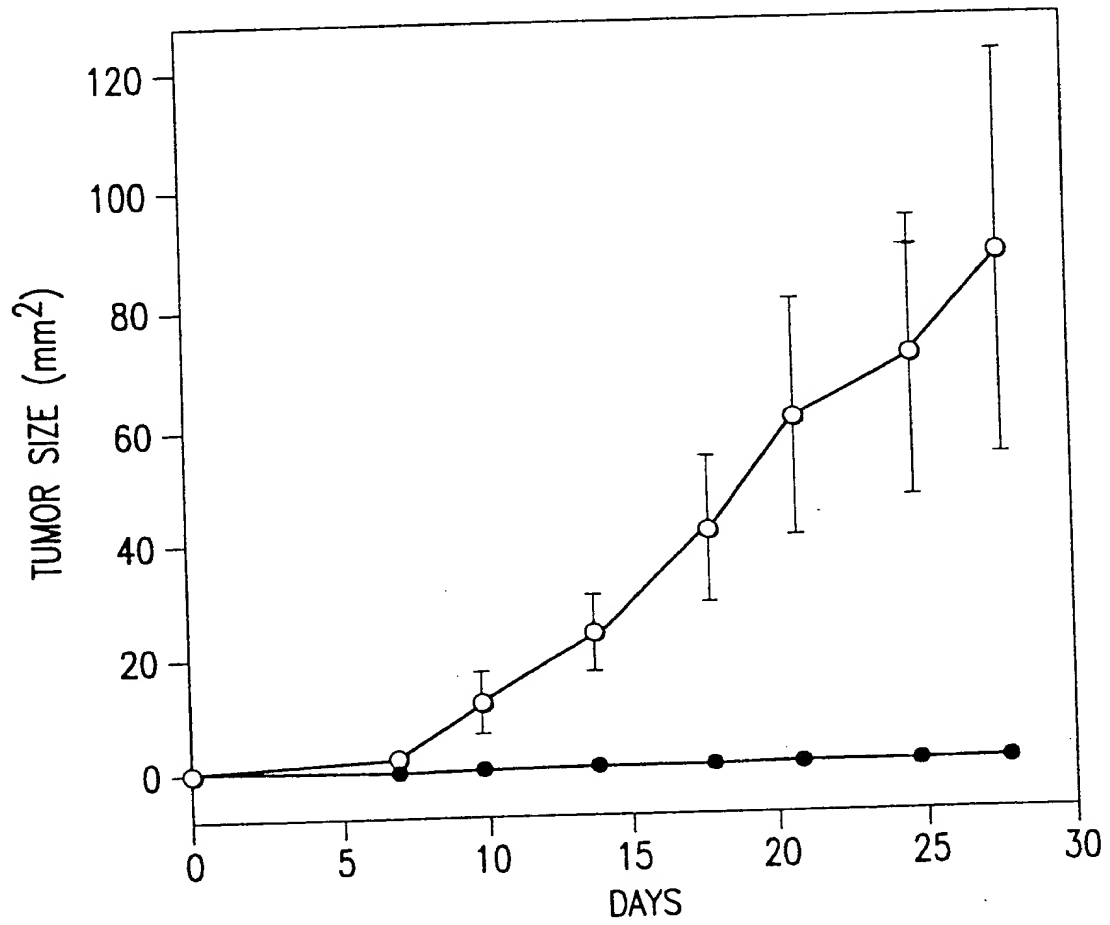


FIG. 16A

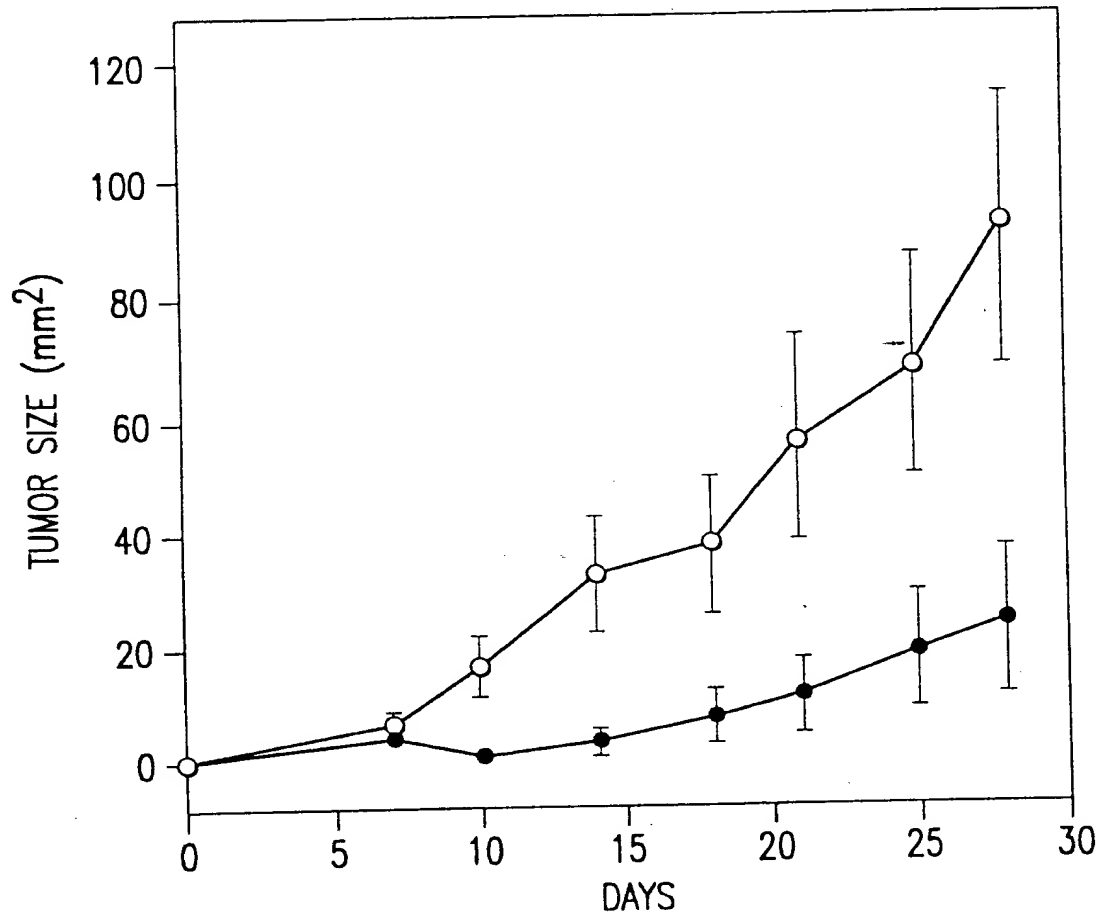


FIG. 16B

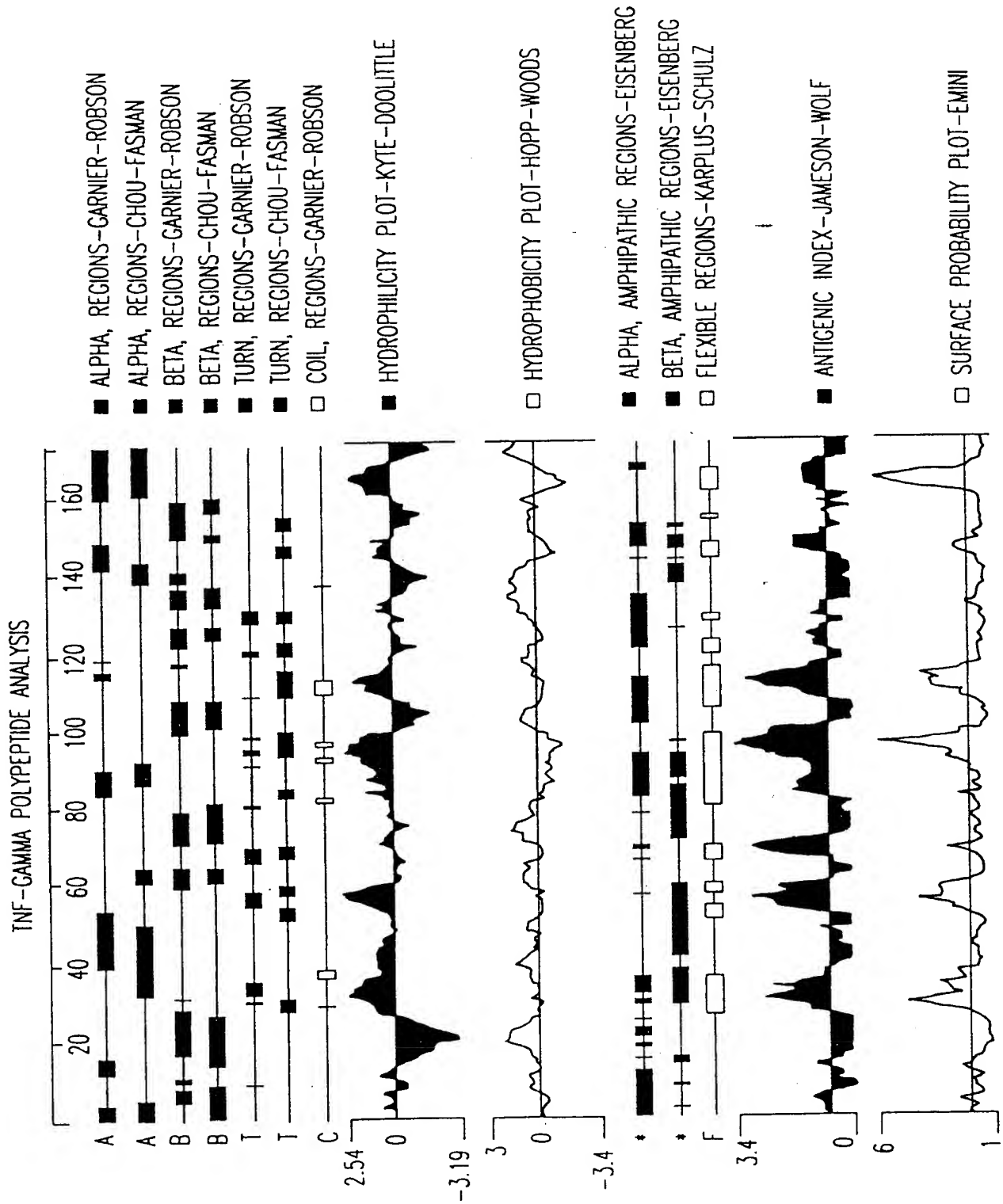


FIG. 17

TNF-gamma-alpha vs. TNF-gamma-beta

| | | | |
|-----------------|-----|--|-----|
| TNF-gamma-alpha | 1 | CCCAATCAAGAGAAATTCCATACTATCACCAGTTGGCCGACTTTCCAAG | 49 |
| TNF-gamma-alpha | 50 | TCTAGTGCAGAAATCCAAGGCACCTCACACCTAGAGTTCCTATACCTCTG | 99 |
| TNF-gamma-alpha | 100 | AGACTCCAGAGGAAAGAACAAGACAGTGCAGAAGGATATGTTAGAACCCA | 149 |
| TNF-gamma-alpha | 150 | CTGAAAACCTAGAAAGTTGAAAAGGAAGCATACCCTCCTGACCTATAAGA | 199 |
| TNF-gamma-alpha | 200 | AAATTTTCAGTCTGCAGGGGATATCCTTGTGGCCCAAGACATTGGTGTT | 249 |
| TNF-gamma-alpha | 250 | ATCATTTGACTAAGAGGAAATTATTTGTGGTGAGCTCTGAGTGAGGATTA | 299 |
| TNF-gamma-alpha | 300 | GGACCAGGGAGATGCCAAGTTTCTATCACTTACCTCATGCCTGTAAGACA | 349 |
| TNF-gamma-alpha | 350 | AGTGTTTTGTTCCAATTGATGAATGGGGAGAAAACAGTTCAGCCAATCAC | 399 |
| TNF-gamma-alpha | 400 | TTATGGGCACAGAATGGAATTTGAAGGTCTGGTGCCTGCCCTTGTCATA | 449 |
| TNF-gamma-alpha | 450 | CGTAAACAAGAGAGGCATCGATGAGTTTTATCTGAGTCATTTGGGAAAGG | 499 |
| TNF-gamma-alpha | 500 | ATAATTCTTGCACCAAGCCATTTTCTAAACACAGAAGAATAGGGGGATT | 549 |
| TNF-gamma-alpha | 550 | CCTTAACCTTCATTGTTCTCCAGGATCATAGGTCTCAGGATAAATTAAAA | 599 |
| TNF-gamma-beta | 1 | ATGGCCGAGGATCTGGCACTGAGCTTTGGGGAAACAGCCAGTGTGGAA | 48 |
| TNF-gamma-alpha | 600 | ATTTTCAGGTCAGACCACTCAGTCTCAGAAAGCCAAAGTAATTTGCCCCA | 649 |
| TNF-gamma-beta | 49 | ATGCTGCCAGAGCACGGCAGCTGCAGGCCCAAGGCCAGGAGCAGCAGCGC | 98 |
| TNF-gamma-alpha | 650 | GGTCACTAGTCCAAGATGTTATTCTCTTTGAACAAATGTGTATGTCCAGT | 699 |
| TNF-gamma-beta | 99 | ACGCTGGGCTCTCACCTGCTGCCTGGTGTGCTCCCCTTCCTGCAGGAC | 148 |
| TNF-gamma-alpha | 700 | CACATATTCTTCATTATTCCTCCCCAAAGCAGTTTTTAGCTGTTAGGTA | 749 |
| TNF-gamma-beta | 149 | TCACCACATACCTGCTTGTGAGCCAGCTCCGGGCCCAGGGAGAGGCCTGT | 198 |
| TNF-gamma-alpha | 750 | TATTCGATCACTTTAGTCTATTTTGAAAATGATATGAGACGCTTTTTAAG | 799 |
| TNF-gamma-beta | 199 | GTGCAGTTCAGGCTCTAAAAGGACAGGAGTTGCACCTTCACATCAGCA | 248 |

FIG. 18A

TNF-gamma-alpha vs. TNF-gamma-beta

| | | | |
|-----------------|------|--|------|
| TNF-gamma-alpha | 800 | CAAAGTCTACAGTTTCCCAATGAGAAAATTAATCCTCTTTCTTGTCTTTC | 849 |
| | | | |
| TNF-gamma-beta | 249 | AGTTTATGCACCTCTTAGAGCAGACGGAGATAAGCCAAGGGCACACCTGA | 298 |
| TNF-gamma-alpha | 850 | CAGTTGTGAGACAAACTCCACACAGCACTTAAAAATCAGTTCCCAGCT | 899 |
| | | | |
| TNF-gamma-beta | 299 | CAGTTGTGAGACAAACTCCACACAGCACTTAAAAATCAGTTCCCAGCT | 348 |
| TNF-gamma-alpha | 900 | CTGCACTGGGAACATGAACTAGGCCTGGCCTTCACCAAGAACCGAATGAA | 949 |
| | | | |
| TNF-gamma-beta | 349 | CTGCACTGGGAACATGAACTAGGCCTGGCCTTCACCAAGAACCGAATGAA | 398 |
| TNF-gamma-alpha | 950 | CTATACCAACAAATTCCTGCTGATCCCAGAGTCGGGAGACTACTTCATT | 999 |
| | | | |
| TNF-gamma-beta | 399 | CTATACCAACAAATTCCTGCTGATCCCAGAGTCGGGAGACTACTTCATT | 448 |
| TNF-gamma-alpha | 1000 | ACTCCCAGGTCACATTCCGTGGGATGACCTCTGAGTGCAGTGAATCAGA | 1049 |
| | | | |
| TNF-gamma-beta | 449 | ACTCCCAGGTCACATTCCGTGGGATGACCTCTGAGTGCAGTGAATCAGA | 498 |
| TNF-gamma-alpha | 1050 | CAAGCAGGCCGACCAACAAGCCAGACTCCATCACTGTGGTCATCACCAA | 1099 |
| | | | |
| TNF-gamma-beta | 499 | CAAGCAGGCCGACCAACAAGCCAGACTCCATCACTGTGGTCATCACCAA | 548 |
| TNF-gamma-alpha | 1100 | GGTAACAGACAGCTACCCTGAGCCAACCCAGCTCCTCATGGGGACCAAGT | 1149 |
| | | | |
| TNF-gamma-beta | 549 | GGTAACAGACAGCTACCCTGAGCCAACCCAGCTCCTCATGGGGACCAAGT | 598 |
| TNF-gamma-alpha | 1150 | CTGTATGCGAAGTAGGTAGCAACTGGTTCCAGCCCATCTACCTCGGAGCC | 1199 |
| | | | |
| TNF-gamma-beta | 599 | CTGTATGCGAAGTAGGTAGCAACTGGTTCCAGCCCATCTACCTCGGAGCC | 648 |
| TNF-gamma-alpha | 1200 | ATGTTCTCCTTGCAAGAAGGGGACAAGCTAATGGTGAACGTCAGTGACAT | 1249 |
| | | | |
| TNF-gamma-beta | 649 | ATGTTCTCCTTGCAAGAAGGGGACAAGCTAATGGTGAACGTCAGTGACAT | 698 |
| TNF-gamma-alpha | 1250 | CTCTTTGGTGGATTACACAAAAGAAGATAAAACCTTCTTTGGAGCCTTCT | 1299 |
| | | | |
| TNF-gamma-beta | 699 | CTCTTTGGTGGATTACACAAAAGAAGATAAAACCTTCTTTGGAGCCTTCT | 748 |
| TNF-gamma-alpha | 1300 | TACTATAGGAGGAGAGCAAATATCATTATATGAAAGTCCTCTGCCACCGA | 1349 |
| | | | |
| TNF-gamma-beta | 749 | TACTATAGGAGGAGAGCAAATATCATTATATGAAAGTCCTCTGCCACCGA | 798 |
| TNF-gamma-alpha | 1350 | GTTCCCTAATTTTCTTTGTTCAAATGTAATTATAACCAGGGGTTTCTTGG | 1399 |
| | | | |
| TNF-gamma-beta | 799 | GTTCCCTAATTTTCTTTGTTCAAATGTAATTATAACCAGGGGTTTCTTGG | 848 |
| TNF-gamma-alpha | 1400 | GGCCGGGAGTAGGGGGCATTCACAGGGACAACGGTTTAGCTATGAAATT | 1449 |
| | | | |
| TNF-gamma-beta | 849 | GGCCGGGAGTAGGGGGCATTCACAGGGACAACGGTTTAGCTATGAAATT | 897 |

FIG. 18B

TNF-gamma-alpha vs. TNF-gamma-beta

TNF-gamma-alpha 1450 TGGGG.CCAAAATTTACACTTCATGTGCCTTACTGATGAGAGTACTAAC 1498
 ||||| ||||||||||||||||||||||||||||||||||||||||
 TNF-gamma-beta 898 TGGGGCCCAAAATTTACACTTCATGTGCCTTACTGATGAGAGTACTAAC 947
 TNF-gamma-alpha 1499 TGGAAAAGGCTGAAGAGAGCAAATATATTATTAAGATGGGTTGGAGGAT 1548
 ||||||||||||||||||||||||||||||||||||||||
 TNF-gamma-beta 948 TGGAAAAGGCTGAAGAGAGCAAATATATTATTAAGATGGGTTGGAGGAT 997
 TNF-gamma-alpha 1549 TGGCGAGTTTCTAAATATTAAGACACTGATCACTAAATGAATGGATGATC 1598
 ||||||||||||||||||||||||||||||||||||||||
 TNF-gamma-beta 998 TGGCGAGTTTCTAAATATTAAGACACTGATCACTAAATGAATGGATGATC 1047
 TNF-gamma-alpha 1599 TACTCGGGTCAGGATTGAAAGAGAAATATTTCAACACCTCCCTGCTATAC 1648
 ||||||||||||||||||||||||||||||||||||||||
 TNF-gamma-beta 1048 TACTCGGGTCAGGATTGAAAGAGAAATATTTCAACACCTCCCTGCTATAC 1097
 TNF-gamma-alpha 1649 AATGGTCACCAGTGGTCCAGTTATTGTTCAATTTGATCATAAATTTGCTT 1698
 ||||||||||||||||
 TNF-gamma-beta 1098 AATGGTCACCAGTGGTCCA 1116
 TNF-gamma-alpha 1699 CAATTCAGGAGCTTTGAAGGAAGTCCAAGGAAAGCTCTAGAAAACAGTAT 1748
 TNF-gamma-alpha 1749 AAACCTTCAGAGGCAAAATCCTTCACCAATTTTCCACATACTTTTCATGC 1798
 TNF-gamma-alpha 1799 CTTGCCTAAAAAAATGAAAAGAGAGTTGGTATGTCTCATGAATGTTTAC 1848
 TNF-gamma-alpha 1849 ACAGAAGGAGTTGGTTTTTCATGTCATCTACAGCATATGAGAAAAGCTACC 1898
 TNF-gamma-alpha 1899 TTTCTTTTGATTATGTACACAGATATCTAAATAAGGAAGTTTGAGTTTCA 1948
 TNF-gamma-alpha 1949 CATGTATATCCCAAATACAACAGTTGCTTGTATTTCAGTAGAGTTTCTTG 1998
 TNF-gamma-alpha 1999 CCCACCTATTTTGTGCTGGGTTCTACCTTAACCCAGAAGACACTATGAAA 2048
 TNF-gamma-alpha 2049 AACAAGACAGACTCCACTCAAAATTTATATGAACACCACTAGATACTTCC 2098
 TNF-gamma-alpha 2099 TGATCAAACATCAGTCAACATACTCTAAAGAATAACTCCAAGTCTTGGCC 2148
 TNF-gamma-alpha 2149 AGGCCAGTGGCTCACACCTGTAATCCCAACACTTTGGGAGGCCAAGGTG 2198
 TNF-gamma-alpha 2199 GGTGGATCATCTAAGCCCGGAGTTCAAGACCAGCCTGACCAACGTGGAG 2248

FIG. 18C

TNF-gamma-alpha vs. TNF-gamma-beta

TNF-gamma-alpha 2249 AAACCCCATCTCTACTNAAAATACNAAATTAGCCGGGCGTGGTAGCGCAT 2298
TNF-gamma-alpha 2299 GGCTGTAANCCTGGCTACTCAGGAGGCCGAGGCAGAANAATTNCTTGAAC 2348
TNF-gamma-alpha 2349 TGGGGAGGCAGAGGTTGCGGTGAGCCAGANCCGCCATIGCACTCCAGC 2398
TNF-gamma-alpha 2399 CTGGGTAACAAGAGCAAACTCTGTCCAAAAAAAAAAAAAAAAA 2442

FIG. 18D

TNF-gamma-alpha vs. TNF-gamma-beta

| | | | |
|-----------------|-----|---|-----|
| TNF-gamma-beta | 1 | MAEDLGLSFGETASVEMLPEHGSCRPKARSSSARWALTCCLVLLPFLAGL | 50 |
| TNF-gamma-alpha | 1 | MRRFLSKVYSFPMRKLILFLVFP | 23 |
| TNF-gamma-beta | 51 | TTYLLVSQLRAGGEACVQFQALKGQEFAPSHQQVYAPLRADGDKPRAHLT | 100 |
| TNF-gamma-alpha | 24 | VVRQTPTQHFKNQFPALHWEHELGLAFTKNRMNYTNKFLLIPESGDYFIY | 73 |
| TNF-gamma-beta | 101 | VVRQTPTQHFKNQFPALHWEHELGLAFTKNRMNYTNKFLLIPESGDYFIY | 150 |
| TNF-gamma-alpha | 74 | SQVTFRCMTSECSEIRQAGRPKNKPDSTVVI TKVTDSYPEPTQLLMGTKS | 123 |
| TNF-gamma-beta | 151 | SQVTFRCMTSECSEIRQAGRPKNKPDSTVVI TKVTDSYPEPTQLLMGTKS | 200 |
| TNF-gamma-alpha | 124 | VCEVGSNWFQPIYLGAMFSLQEGDKLMVNVSDISLVDYTKEDKTFFGAFL | 173 |
| TNF-gamma-beta | 201 | VCEVGSNWFQPIYLGAMFSLQEGDKLMVNVSDISLVDYTKEDKTFFGAFL | 250 |
| TNF-gamma-alpha | 174 | L | 174 |
| TNF-gamma-beta | 251 | L | 251 |

FIG. 19

TNF-gamma-beta

1 ATGCGCGAGGATCTGGGACTGAGCTTTGGGAAACAGCCAGTGCGAAATGCTGCCAGAG 60
 1 M A E D L G L S F G E T A S V E M L P E 20
 61 CACGGCAGCTGCAGGCCCAAGGCCAGGAGCAGCAGCGCAGCTGGGCTCTCACCTGCTGC 120
 21 H G S C R P K A R S S S A R W A L T C C 40
 121 CTGGTGTGCTCCCCTTCCCTTG CAGGACTCACCACATACCTGCTTGTCAGCCAGCTCCGG 180
 41 L V L L P F L A G L T T Y L L V S Q L R 60
 181 GCGCAGGAGAGGCCCTGTGTGCAGTTCCAGGCTCTAAAAGGACAGGAGTTGCACCTTCA 240
 61 A Q G E A C V Q F Q A L K G Q E F A P S 80
 241 CATCAGCAAGTTTATGCACCTCTTAGAGCAGACGGAGATAAGCCAAGGGCACACCTGACA 300
 81 H Q Q V Y A P L R A D G D K P R A H L T 100
 301 GTTGTGAGACAAACTCCCACACAGCACTTTAAAAATCAGTCCCAGCTCTGCACTGGGAA 360
 101 V V R Q T P T Q H F K N Q F P A L H W E 120
 361 CATGAAGTGGCTGGCCTTACCAAGAACCGAATGAAGTATACCAACAAATTCCTGCTG 420
 121 H E L G L A F T K N R M N Y T N K F L L 140
 421 ATCCAGAGTCGGGAGACTACTTCATTTACTCCAGGTCACATTCGGTGGGATGACCTCT 480
 141 I P E S G D Y F I Y S Q V T F R G M T S 160
 481 GAGTGCAGTGAAATCAGACAAGCAGGCCGACCAACAAGCCAGACTCCATCACTGTGGTC 540
 161 E C S E I R Q A G R P N K P D S I T V V 180
 541 ATACCAAGGTAACAGACAGCTACCCTGAGCCAACCCAGCTCCTCATGGGGACCAAGTCT 600
 181 I T K V T D S Y P E P T Q L L M G T K S 200
 601 GTATGCCAAGTAGGTAGCAACTGGTTCAGCCCATCTACCTCGGAGCCATGTTCTCCTTG 660
 201 V C E V G S N W F Q P I Y L G A M F S L 220
 661 CAAGAAGGGGACAAGCTAATGGTGAACGTCAGTGACATCTCTTGGTGGATTACACAAAA 720
 221 Q E G D K L M V N V S D I S L V D Y T K 240
 721 GAAGATAAAACCTTCTTTGGAGCCTTCTTACTATAGGAGGAGAGCAAATATCATTATAG 780
 241 E D K T F F G A F L L 251
 781 AAAGTCCTCTGCCACCGAGTTCCTAATTTCTTTGTTCAAATGTAATTATAACCAGGGGT 840
 841 TTTCTTGGGGCCGGGAGTAGGGGCATTCCACAGGACAACGGTTTAGCTATGAAATTTGG 900

FIG. 20A

TNF-gamma-beta

901 GCCCCAAAATTCACACTTCATGTGCCTTACTGATGAGAGTACTAACTGGAAAAAGGCTG 960
961 AAGAGAGCAAATATATTATTAAGATGGGTGGAGGATTGGCGAGTTTCTAAATATTAAGA 1020
1021 CACTGATCACTAAATGAATGGATGATCTACTCGGGTCAGGATTGAAAGAGAAATATTTCA 1080
1081 ACACCTTCCTGCTATACAATGGTCACCACTGGTCCA 1116

FIG. 20B